

REMARKS

Applicant requests entry and consideration of the amended and new claims during initial examination. The amended, original and new claims include new and additional limitations relating to the specific structure of the invention disclosed in this application. Specifically, the claims now presented are directed to a relationship of structural components not found in the prior art of record in the parent application, Serial No. 09/813,915 (now abandoned).

The claims now in this application specifically define the relationship of components in which the hub and adapter include partial spherical surfaces with torque transmitting elements interconnecting said surfaces to enable driving torque to be transmitted from the adapter to the hub with the hub being capable of universal movement in relation to the adapter and drive shaft. Additionally, the claims set forth the relationship of structure so that the adapter can be separated from the hub when the adapter is in generally perpendicular relation to the hub which can only occur when the adapter is removed from the drive shaft. In this condition, that is, when the adapter is removed from the drive shaft and moved to perpendicular relation to the hub, the adapter and torque transmitting balls are subject to falling out of the hub when the hub is supported generally in horizontal position and the open ends of the axial recesses in the hub face downwardly. This can result in the adapter and the balls falling out of the hub unexpectedly resulting in the torque transmitting balls becoming displaced by rolling along supporting surfaces in response to the forces of gravity.

As set forth in the claims and in the specification, the possibility of the adapter falling out of the hub, along with the balls, when the adapter is in perpendicular relation to the

hub can present a problem. The present invention solves this problem by providing retaining structure to prevent the balls from exiting the open end of the axial recesses when the adapter is in perpendicular relation to the hub which can only occur when the adapter and hub have been removed from the drive shaft of a pelletizer. Two embodiments of the retaining structure have been disclosed and claimed with one embodiment including the plate structure illustrated in Figures 2 and 3 and the other embodiment including the pins illustrated in Figures 4 and 5 of the drawings.

The prior art of record in the parent application includes the Adams patent assigned to the same assignee as in this application combined with Kumpar (4,358,283) and further in view of Smith (2,182,455) with respect to certain claims. Adams discloses a cutter hub including an adapter and torque transmitting balls subject to the possibility of the adapter and balls dropping from the hub when removed from the drive shaft and the adapter being positioned in perpendicular relation to the hub. Applicant concurs with the Examiner with respect to the Adams disclosure and also concurs that Adams fails to teach a removable retainer either in the form of a plate or in the form of a pin. Moreover, the Adams patent does not contain any suggestion, teaching or structure for preventing the torque transmitting balls from exiting the open end of the axial recesses when the adapter and hub have been removed from the drive shaft and the adapter is oriented in perpendicular relation to the hub.

The patent to Kumpar and the patent to Smith also fail to teach or suggest an arrangement in which torque transmitting balls are prevented from exiting axial recesses in a hub bore when the adapter and hub have been removed from a drive shaft and the adapter oriented in perpendicular relation to the hub. The function of the elements 20 and 21 in Figure 1 of Kumpar do not

form obstructions for an open end of axial recesses in a hub in which the axial recesses can only be used as passages for the torque transmitting balls when an adapter that was attached to a drive shaft is removed from the drive shaft and oriented in perpendicular relation to the hub. The retaining structure in Kumpar may form an obstruction for an outer end of recesses but they do not suggest or teach a retaining structure in combination with the components of an adapter mounted on a drive shaft and a hub universally pivotally supported on the adapter in which the possible exiting of torque transmitting balls from the recesses can only occur when the adapter has been removed from the shaft and oriented in perpendicular relation to the hub.

In view of the dissimilarity in the structural and functional relationship of the Kumpar ball joint structure and the structure in the Adams patent, a person of ordinary skill in this art does not receive any suggestion or teaching from Kumpar that would render it obvious to a person of skill in this art to somehow use the structure of Kumpar to suggest that the Adams patent should be provided with the retaining structures specifically claimed in the claims now in this application. The Kumpar and Smith patents do not teach or suggest that a problem exists with respect to the balls exiting from any recesses when either of the components of the joints in Kumpar and Smith are detached from a drive shaft. In Kumpar, torque transmitting balls are engaged by spring members 20 in a normal relationship of the drive shaft to the outer ring and deflects the rubber seal member 22 during extreme angular positions of the drive shaft. There is no suggestion in Kumpar that components 20 and 22 become effective only when one component of the drive connection is connected from a drive shaft and pivoted to a perpendicular relation to the other component of the joint. Likewise, the Smith patent, relied upon in the parent application, also fails to disclose this concept since the flange ring 26, outer ring 18 and retainer 20 and spring 21 in the Smith patent are not related

in the same manner as claimed in this application. In 'Smith, retainers 19 and 20 maintain contact with and control the relative positions of the balls through the spring 21 which constantly presses a plunger 22 against a seal ball 23 which is pressed against a washer 24 in the retainer 19. Accordingly, the Smith patent does not suggest to a person of ordinary skill in the art that the structure in the Adams patent should be modified in a manner that would arrive at a structure equivalent to that now being claimed in this application in which the problem being solved only occurs and exists when the adapter is separated from the drive shaft along with the hub and the adapter then rotated to a position perpendicular to the hub.

Applicant submits that no suggestion, teaching or "reason apparent" exists for a person of ordinary skill in the art to modify the Adams patent in view of Kumpar or Smith. Also, the other prior art of record in this application and in the parent application do not suggest the specific structure, function and concept of the invention claimed in this application. Accordingly, an early and favorable consideration of this application is requested.

Respectfully submitted,

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